HOW INVENTORS HAVE PROPOSED TO SAVE MEN FROM SUBMARINE DEATH

Some of the methods of saving lives proposed for just such crises as that which has come to the submarine F-4 are described in a vivid article in the Scientific American for June 27 by Maj. H. Pannerman Phillips, an expert. He wrote:

There have been 17 serious submarine accidents in the last 10 years, of which 11 occurred to British vessels. The total number of lives lost in submarines up to the present date amounts to 211.

With regard to the question of having special "lifting ships" in readiness to meet accidents, it has been pointed out by naval officers, first, that British submarines are stationed all round the coast—at such places as wide apart as Plymouth, Portsmouth, Harwich, Dundee and Lamlash, as well as at places abroad, like Gibraltar, Malta and Hongkong, and that those attached to home ports go to considerable distances and dive in various places, so that it would be impracticable to have lifting-vessels standing by in all cases. Secondly, they say that in scarcely any known instance would a lifting ship have been of assistance in saving life, if it had been available, and that in all cases of accidents where life has been preserved, it has been due to the efforts of the crew themselves without any outside assistance.

On the other hand, it has been said that officers and men of all submarine service have not hitherto attached much importance to life-saving appliances as applied to the particular vessel for which they are responsible. They have said that the air-lock and helmet might enable men to escape if circumstances were propitious, but that these same circumstances are not likely to be propitious in the case of accidents. On the contrary, they know full well that, if anything serious happens to a boat, the crew are almost certain to lose their lives, and they accept the risk as a part of "the day's work."

Accidents Have Decreased.

There is no doubt that the accidents due to what may be called true submarine risk, that is, mishaps which are not caused by external interference, such as collisions, and are due to cause and circumstances inherent to the system, are steadily on the decrease, and this satisfactory result must be ascribed to be constant improvements in construction and equipment. For instance, in the "A" class of submarine in the British service (13 boats) 25 lives have been lost by collision, and 32 by foundering and explosions. In the "B" class (11 boats) 15 lives have been lost by collision—none through other causes. In the "C" class (28 boats) 13 lives have been lost so far; in the "E" class there has been one accident from explosion, which was responsible for the loss of three lives.

Whatever the cause of the mishap to the "A-7" there is apparently no known reason to suppose that the conning-tower was damaged. It doubtless remained clear of the sand and mud in which a portion of the vessel was imbedded, and under such circumstances, although the airlocks and helmets mat have not been of any use, owing to the depth, if the conning tower had been detachable as a whole apparatus, water-tight and provided with air-storage, which would rise on being set free from the hull, there would have been some chance of rescuing the crew, provided they were not killed by the same cause which prevented the rising submarine itself. One such apparatus has been designed and patented by Mr. E. J. Castle, a retired draughtsman from his majesty's service, and another by Mr. G. Fitzhardinge Rose of London.

Mr. Castle's idea is, to use his own words, referring to the illustration of the invention, as follows:

"To fit two towers, 5 feet in diameter, and about 5 feet 6 inches deep, constructed of steel, well strengthened inside with brackets and steel angles, and placed on the water-tight bulkheads. By this method, in the event of any one compartment getting waterlogged by escaping into an unflooded one, the crew can release themselves from the vessel by opening the escape scuttles on either side of the bulkhead in submarines and towers, and closing both when inside (making the vessel intact) and detaching them by means of clips. In the case of the "Lutine" (French submarine) where all the crew were lost, some escaped from a flooded to an unflooded compartment, and lived for an hour but there was no detachable tower or other device by which they could get out. By my method escape is afforded from three compartments for about 8 to 10 men in each. A small hydraulic is provided for the purpose of exerting an upward pressure is required.

"On the manhole cover in each tower is a signal apparatus fitted with a cork buoy, which, on being released from inside by turning back the screw, rises to the surface and will show the position of towers. The towers are three feet six inches above the deck, but they can be fitted at varying heights to reduce resistance if required.

"A flexible wire is stowed in a water-light ring, the buoy resting upon it, the wire passing over a bracket, so as to have a vertical pull in the event of the vessel being inclined. The alarm is located below the cover; ballast is fitted for the purpose of keeping the towers stable in the light condition.

"Although the fitting of chamber is not a new idea, as a few have been patented, this plan is theoretically, and I think if tried would be found to be practically correct for life-saving purposes, and would not weaken the vessel, while at the same time giving good chances for the crew to get out at either end at great depth. There would be a danger, as with the present conning-towers, of damage in case of collision, but still the vessel would continue to be water-tight."

Mr. Rose's invention includes a submarine lifeboat and buoy. The lifeboat consists of a cylindrical chamber some eight feet in diameter, held under normal conditions within a water-tight compartment by means of a stout screw carried through the base. At one spot within the water-tight compartment is a secondary chamber containing a buoy attached to a length of wire. On an accident happening to the submarine, the crew enter the water-tight belt and, sealing the door behind them, pass on to the inner cylinder. One stays behind sufficiently long to release, by means of a level gear, the buoy in the smaller chamber. The buoy rises to the surface at once, and indicates the whereabouts of the submerged craft. As soon as the crew are within the inner cylinder and the doors are shut, the cylinder is released from its contact with the body of the submarine by the unscrewing of the grip beneath the floor. If the compartment in which the cylinder rests has not been damaged, the cylinder at once rises to the surface by its own buoyancy. There is an electric light in the conning-tower and an apparatus for firing distance-rockets, so that, whether by day or night, attention can be called to the position of the floating cylinder, with a view to obtaining help and avoiding collision. In calm weather, a collapsible boat can be launched through the conning-tower, to enable help to be sought from the shore or from passing vessels, or to locate the search-vessels which might be sent out to look for the submarine. Provision has been made, however, for the contingency of such damage to the submarine as may prevent the lifeboat cylinder from rising to the surface and cause the detention of the crew at the bottom of the sea.

Buoys to Rise to Surface.

Within the cylinder are two other compartments, which can be opened to the sea by a convenient gear. These contain buoys which, rising to the surface, carry with them airtubes, electric light and telephone wires. The buoys which, rising to the surface, carry with them airtubes, electric light and telephone wires. The buoys are so shaped that they ride on the waves and keep a free air-vent, and on the exhaust-pipe of one buoy there is fitted a siren. By pumping fresh air in through this one, the siren is worked, and the attention of passing or search-vessels called to the spot. In proximity to the siren is a plate covering a telephone transmitter, which can be broken by the rescue party, and communication thus established with the men imprisoned below. If the salvage operations are likely to take some time, arrangements can be made for passing liquid food down the air-pipe, as has been done in the case of miners buried alive under a fall of earth, but with whom communication has been established pending their being dug out. The inventor maintains, however, if his ideas are properly carried out, the crew would be able to stay at the bottom for a very considerable time, as the lockers under the seat in the cylinder are supposed to be kept stocked with provisions, in readiness for such an emergency, and there is a tank which is to be kept filled with fresh water. In one locker there is an electric battery, to give light to the imprisoned men, and in another is compressed oxygen, in case of need. There is also an inner chamber round the boat, filled with compressed ordinary air, which can be used if required. Round the fresh-water tank is another tank, in which sea-water can be admitted by a valve, to be used as ballast, if necessary, and this tank is also to be used as laboratory and a means of keeping the boat pure and clean—a very important consideration if life is to be maintained for any length of time.

NAVY OFFICIALS HERE CREATING ORGANIZATION FOR SALVAGE WORK

(Continued from page one)

Any one of the new chains will easily support the entire weight of the cylinder.

In order to determine the location of the minute leaks in the tube the cylinder was closed and an air pressure of 25 pounds per square inch pumped in, the hose being connected with the submarine F-1, brought alongside the crane. The outside of the cylinder was then gone over with lather and a few air bubbles around the deadlights showed that the fittings were not absolutely watertight. The wooden framework around the cylinder, designed as an added protection to the portholes and fittings, was removed and a crew of men set to work to correct the small error.

Civil Engineer Glenn S. Burrell will probably go down in the bell this afternoon to give it a last technical look-over before a diver is sent down in it in deep water.

This afternoon Capt. Smith, Naval Constructor Furer, H. G. Plummer of the Hawaiian Dredging Co., and several of the submarine officers are busily engaged collecting material and making up the wrecking organization. Yesterday estimates of the daily cost of the work were made, and these figures submitted to Washington. It was the official O. K. to the expenditure of this amount that arrived this morning and set the wheels turning again.

There is now no line fast to the F-4, that held by the Navajo having carried away about 5 o'clock yesterday afternoon. However, the exact spot is carefully plotted and buoyed, and when the navy men are ready to resume operations it will be a matter of a few hours only to again catch the submarine in a wire drag.

JAPAN-CHINA DISPUTE WILL END PEACEFULLY, PEKING EDITOR'S OPINION

That the Chino-Japanese question will soon be amicably settled is the opinion of Li Sum Ling, editor and owner of the Peking Daily News and of several other Chinese papers, who with a fellow editor, Wang Wen Ping, arrived in Honolulu on the Korea and is spending a short time here.

Li is commissioned by the Chinese government to investigate financial institutions in America, and declares China looks to the United States for commerce, for education and for friendship.

He places his faith in President Yuan Shih-kai, whom he depicts as a great statesman and with the interest of China at heart. He thinks Japan is afraid of the powers stepping into Chinese affairs, which would deprive her of leadership in Asia.

The editor will visit the exposition and then go to Canada. He will stop at Chicago, Washington and New York and may return to China via the European war zone.

Morning on 'CHANGE

Just 64 shares of sugar stock sold between closing yesterday and closing today. There was no sugar sale on the exchange at all today. Between boards Waialua, which today increased its dividend from 50 cents a month to a dollar, went down 1 to 99. Oahu Sugar dropped 1-4.

$9000 more Oahu Railroad bonds sold without change in price. O. R. & L. stock also sold unchanged. There was a $500 sale in Hilo 1901 bonds at an andvance of 5 on the strength of the interest payments.

Ewa announced an increase in the monthly dividend from 15 to 20 cents.

"Laughing gas" caused the death of Dr. Thomas D. Bailey, a dentist of Monteclair, N. J., who was found dead in his office. His death is believed to be an accident.

LOCAL AND GENERAL

Hawaiian Lodge No. 21, F. and A. M., special second degree tonight at 7:30 o'clock.

Circuit Judge Whitney today granted a divorce to Theodore M. Bauman from Virginia Bauman, on the ground of desertion.

Books may be reserved at the Library of Hawaii at any time after April 1. Application must be made at the loan desk.

The Catholic Ladies' Aid Society will meet in the roof garden at the Alexander Young hotel at 9 o'clock Thursday morning.

Circuit Judge Whitney has appointed the Hawaiian Trust Company administrator of the estate of Margaret A. Robertson, an insane person.

The regular monthly meeting of the Catholic Ladies' Aid Society will be held on the roof garden of the Young hotel on Thursday morning, April 1, at 10 o'clock.

Pictures illustrating the beauties of the Hawaiian islands will be loaned by the Hawaii Promotion Committee to the Blaisdell hotel, where they will adorn the new lobby when it is completed.

"With the People and Missions of Ceylon," will be the subject of a stereopticon lecture by Rev. A. A. Ebersole in the Central Union parish house at 7:30 tonight. The public is invited.

Prof. Curtis of Western Reserve University will speak on the subject "What Americans Want" at the Y. M. C. A. on Thursday evening. The address will be given in Cooke Hall at 8 o'clock.

To increase the large fund of information concerning tourists to Hawaii all visitors will hereafter be invited to sign their names and register their home and Hawaii address in the Promotion Committee log book.

Circuit Judge Stuart entered default judgment yesterday against J. H. LeClaire and the Honolulu Skating Rink in the sum of $94.25, together with costs. Judgment is on a suit for debt brought by Harry T. Mills.

Johann Bruns has filed a petition in circuit court asking that the Hawaiian Trust Company be appointed administrator of the estate of John Eilers Bruns, who died March 27, leaving an estate estimated at $1044.93.

"Olivet of Calvary," the sacred cantata by J. H. Saunders, will be sung tonight at St. Andrew's cathedral. The work is written for two solo voices, tenor and baritone and chorus, with interspersed hymns to be sung by the congregation.

The public is cordially invited to attend a conference explanatory of the Bahai movement for universal religion, brotherhood and peace to be held in the Kilohana building, Beretania street, at 8:15 next Friday evening, April 2. The speakers will be Mrs. Corinne True of Chicago, Mr. C. Mason Remey of Washington, D. C., and Mr. George O. Latimer of Portland, Oregon, who are in Honolulu engaged in the work of the Bahai movement.

STAR-BULLETIN GIVES YOU TODAY'S NEWS TODAY

MEASURE TO PROHIBIT SALOONS NEAR SCHOOLS AND CHURCHES PASSED

On unanimous vote of the house of representatives today, Cooke's bill providing that no saloon, bar or liquor house be located within 500 feet of the nearest property line of any school, church or chapel in this Territory was passed.

The bill has been sent to the senate. The measure exempts all places where liquor is now sold or served and will not effect those places when license renewals are requested.

JACK LONDON ON WAR.

Jack London, the author, spoke against war at the University club today. President Mott-Smith presided and the noted writer declared that war is unnecessary and urged all present to take a stand against it.